Title: CONTROL DEVICE FOR MOTOR FAN OF VEHICLE
Inventor(s): Tomofumi FURUKAWA et al.
DOCKET NO.: 088693-0114

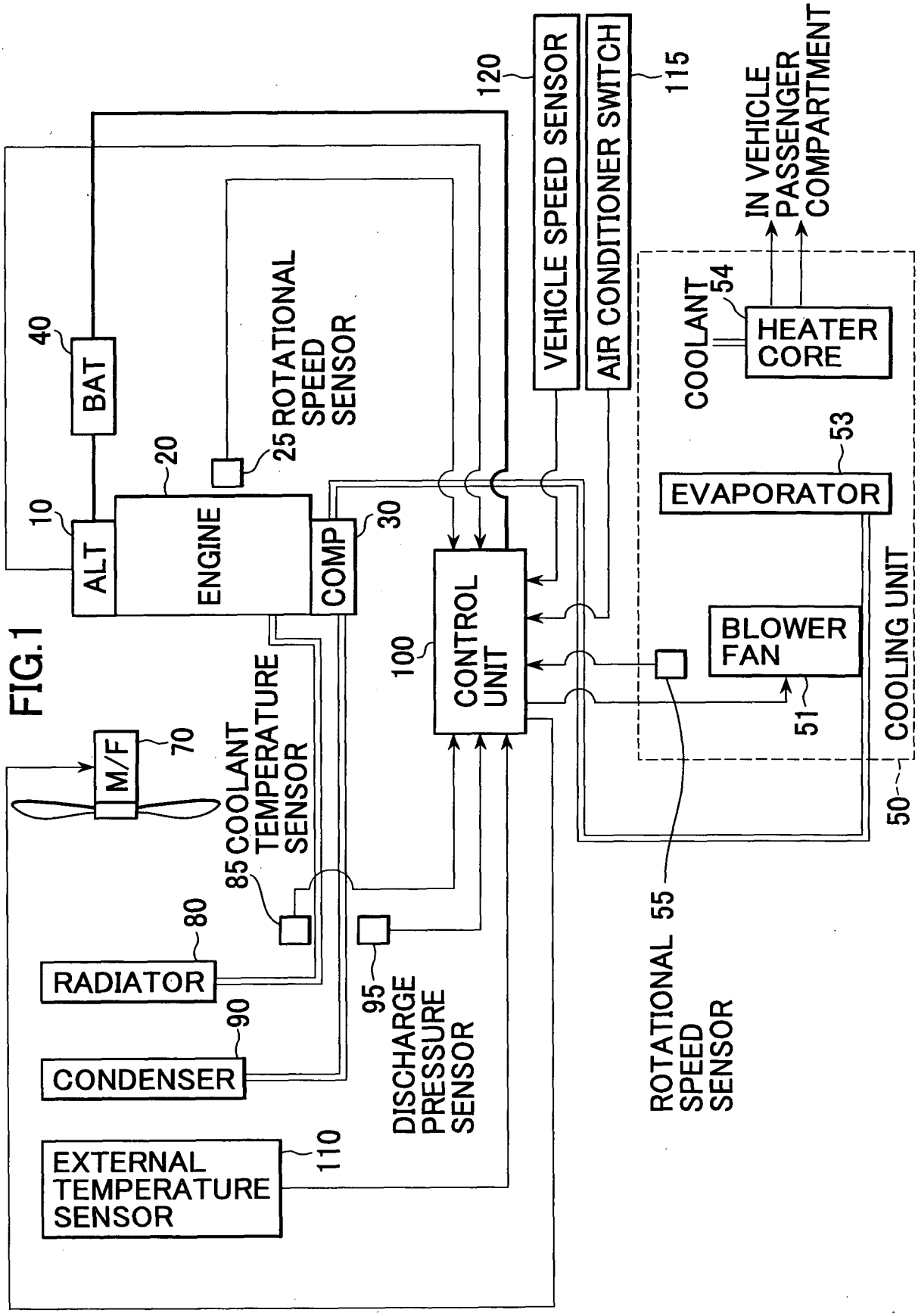

FIG.1

FIG.2

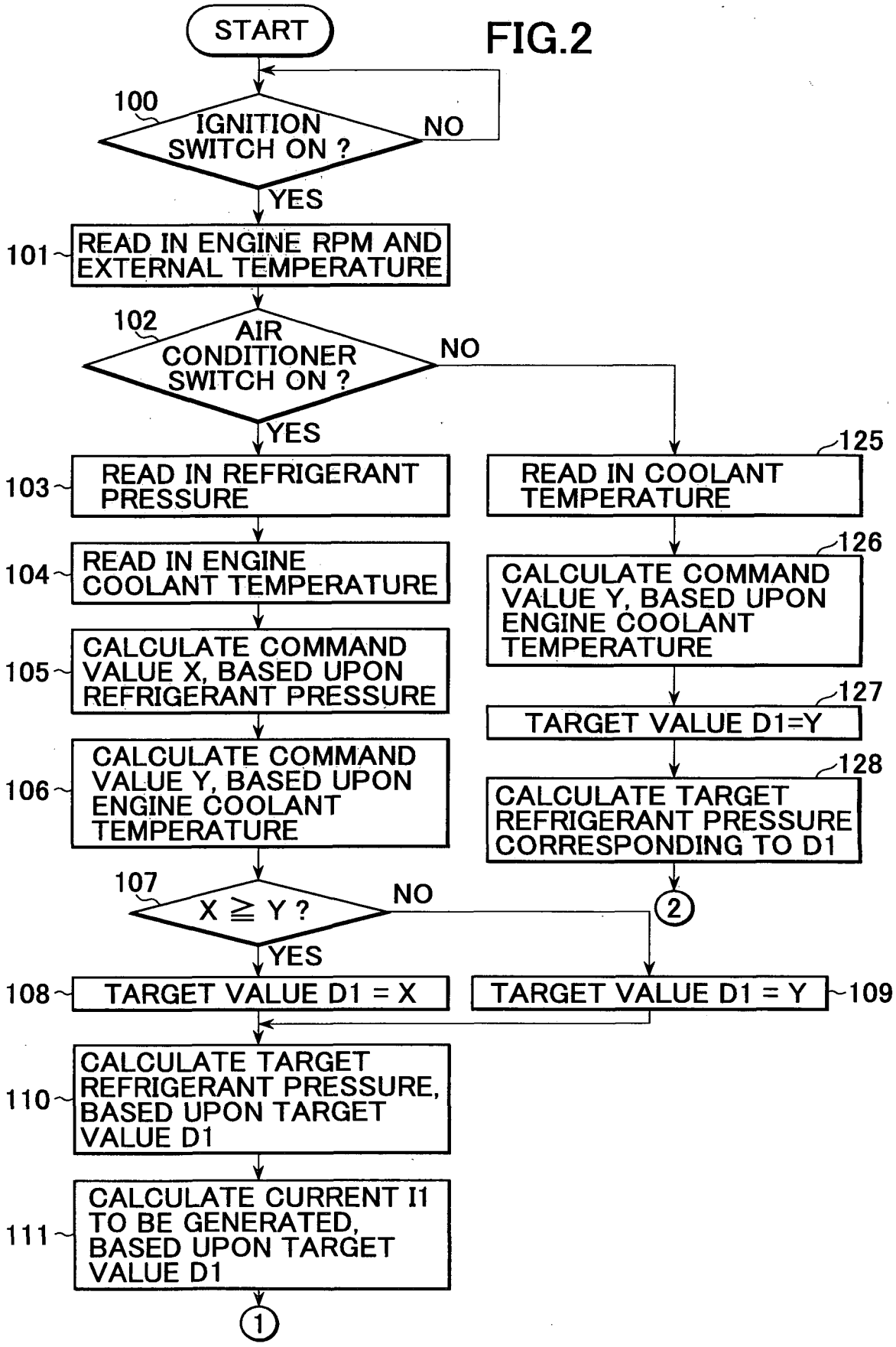
START
100
IGNITION SWITCH ON ?
NO
YES
101
READ IN ENGINE RPM AND EXTERNAL TEMPERATURE
102
AIR CONDITIONER SWITCH ON ?
NO
YES
103
READ IN REFRIGERANT PRESSURE
104
READ IN ENGINE COOLANT TEMPERATURE
105
CALCULATE COMMAND VALUE X, BASED UPON REFRIGERANT PRESSURE
106
CALCULATE COMMAND VALUE Y, BASED UPON ENGINE COOLANT TEMPERATURE
107
X ≧ Y ?
NO
YES
108
TARGET VALUE D1 = X
109
TARGET VALUE D1 = Y
110
CALCULATE TARGET REFRIGERANT PRESSURE, BASED UPON TARGET VALUE D1
111
CALCULATE CURRENT I1 TO BE GENERATED, BASED UPON TARGET VALUE D1
1
125
READ IN COOLANT TEMPERATURE
126
CALCULATE COMMAND VALUE Y, BASED UPON ENGINE COOLANT TEMPERATURE
127
TARGET VALUE D1=Y
128
CALCULATE TARGET REFRIGERANT PRESSURE CORRESPONDING TO D1
2

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FIG.3

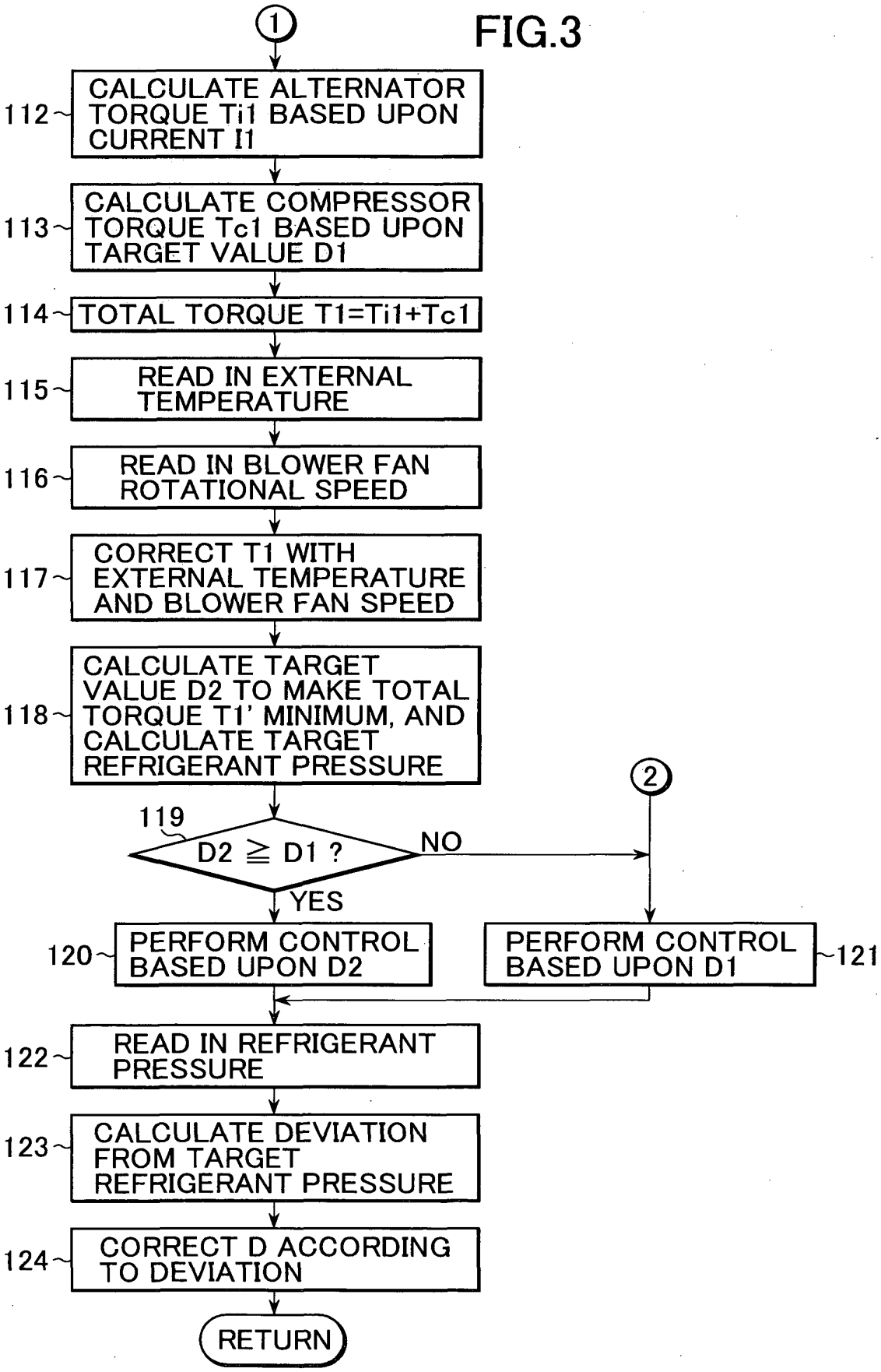

FIG.4A

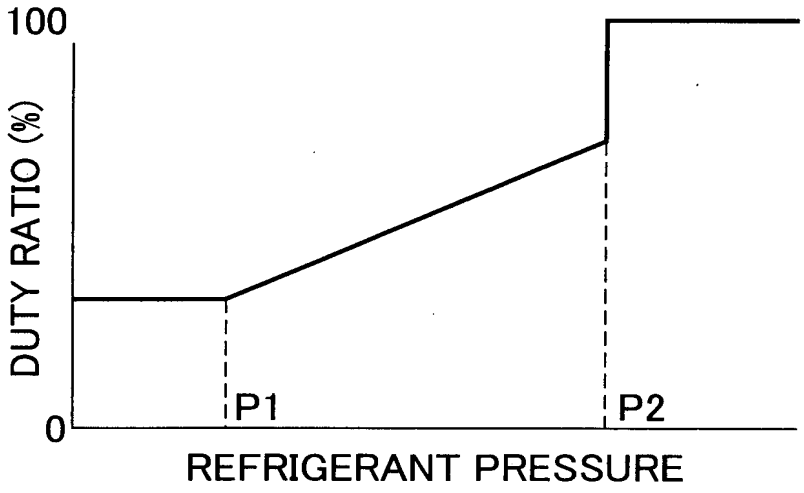
100
DUTY RATIO (%)
0
P1
P2
REFRIGERANT PRESSURE

FIG.4B

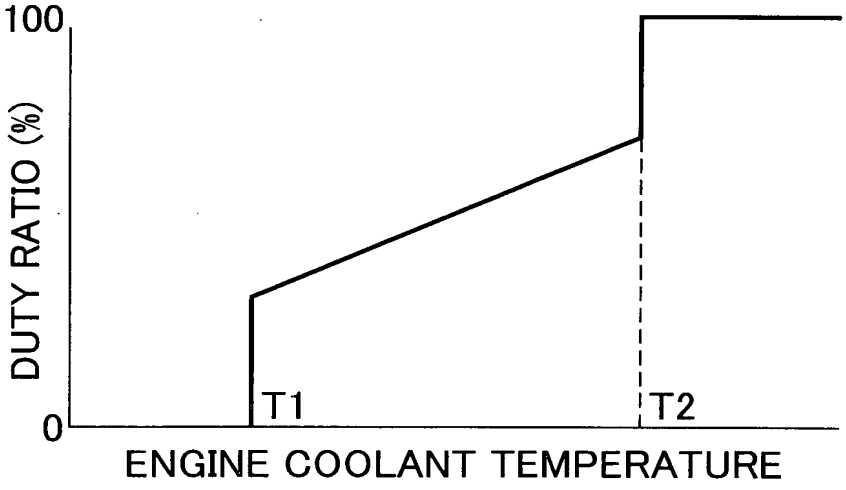
100
DUTY RATIO (%)
0
T1
T2
ENGINE COOLANT TEMPERATURE

FIG.5

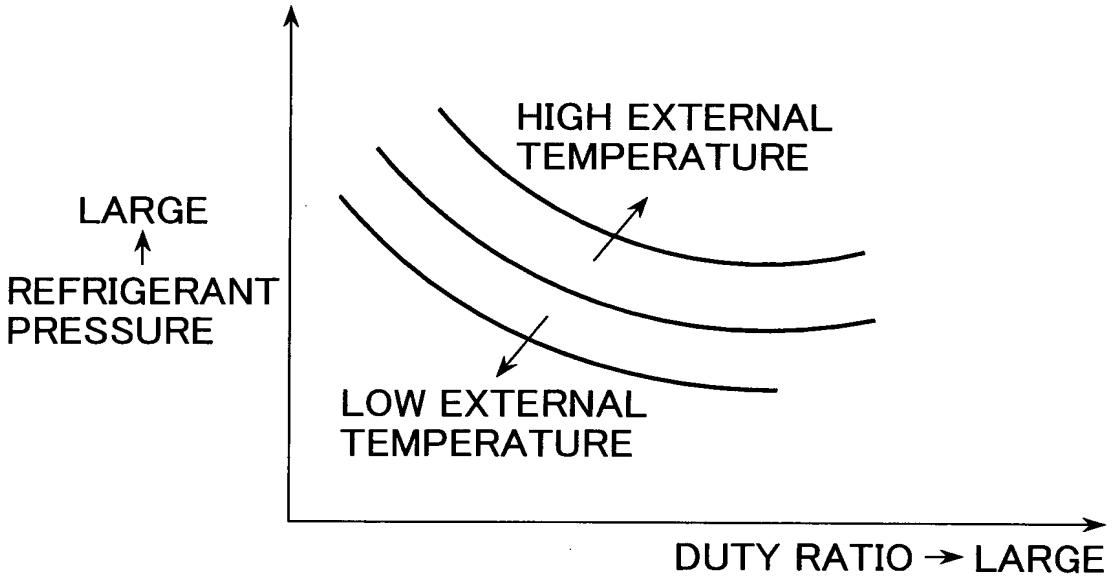
HIGH EXTERNAL TEMPERATURE
LARGE
REFRIGERANT PRESSURE
LOW EXTERNAL TEMPERATURE
DUTY RATIO → LARGE

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FIG.6

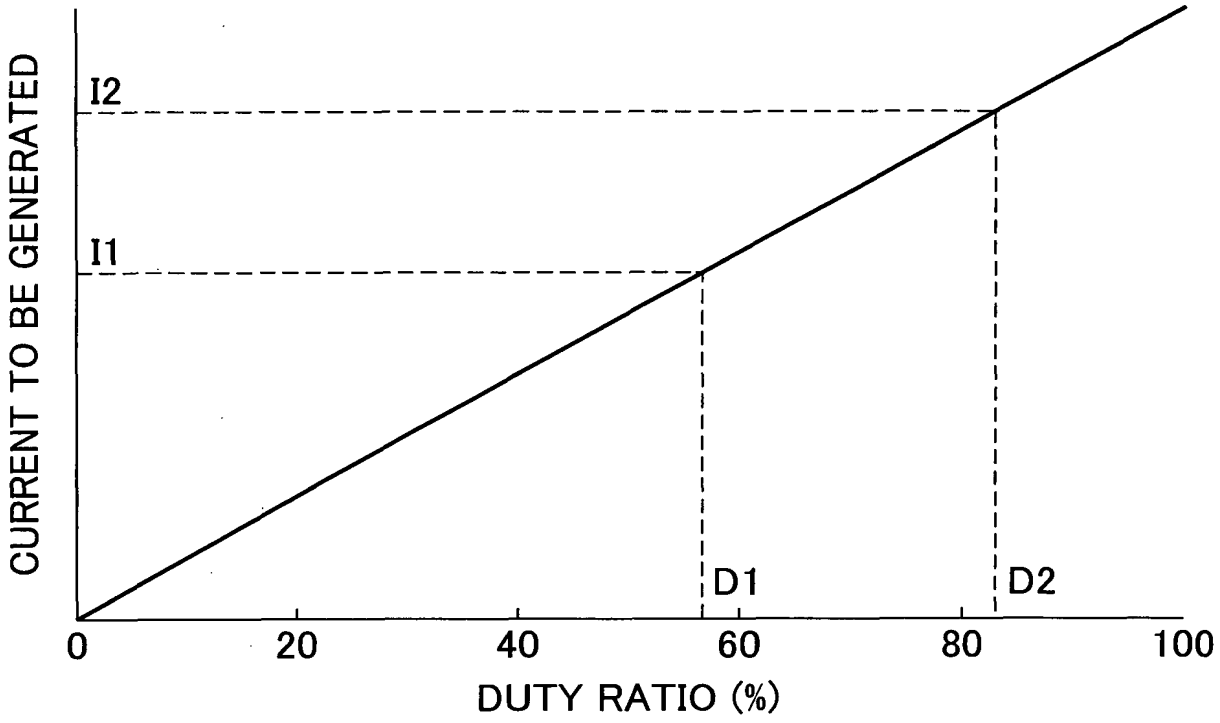

FIG.7

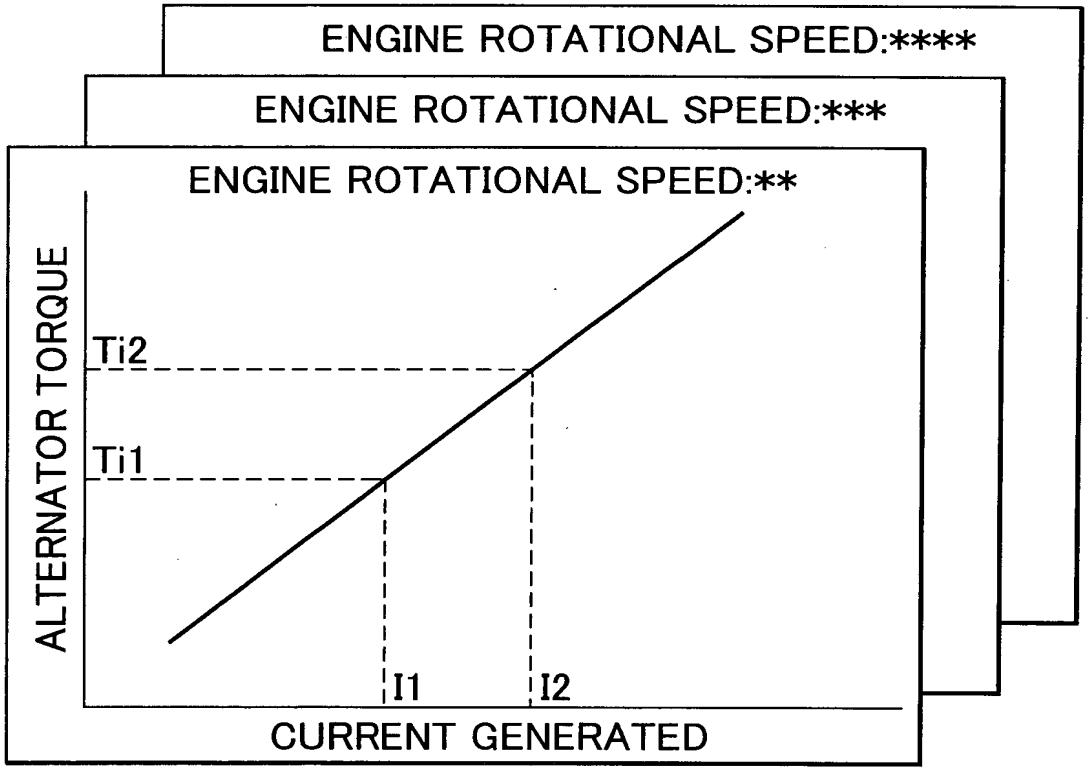
ENGINE ROTATIONAL SPEED:****
ENGINE ROTATIONAL SPEED:***
ENGINE ROTATIONAL SPEED:**
ALTERNATOR TORQUE
Ti2
Ti1
I1
I2
CURRENT GENERATED

FIG.8

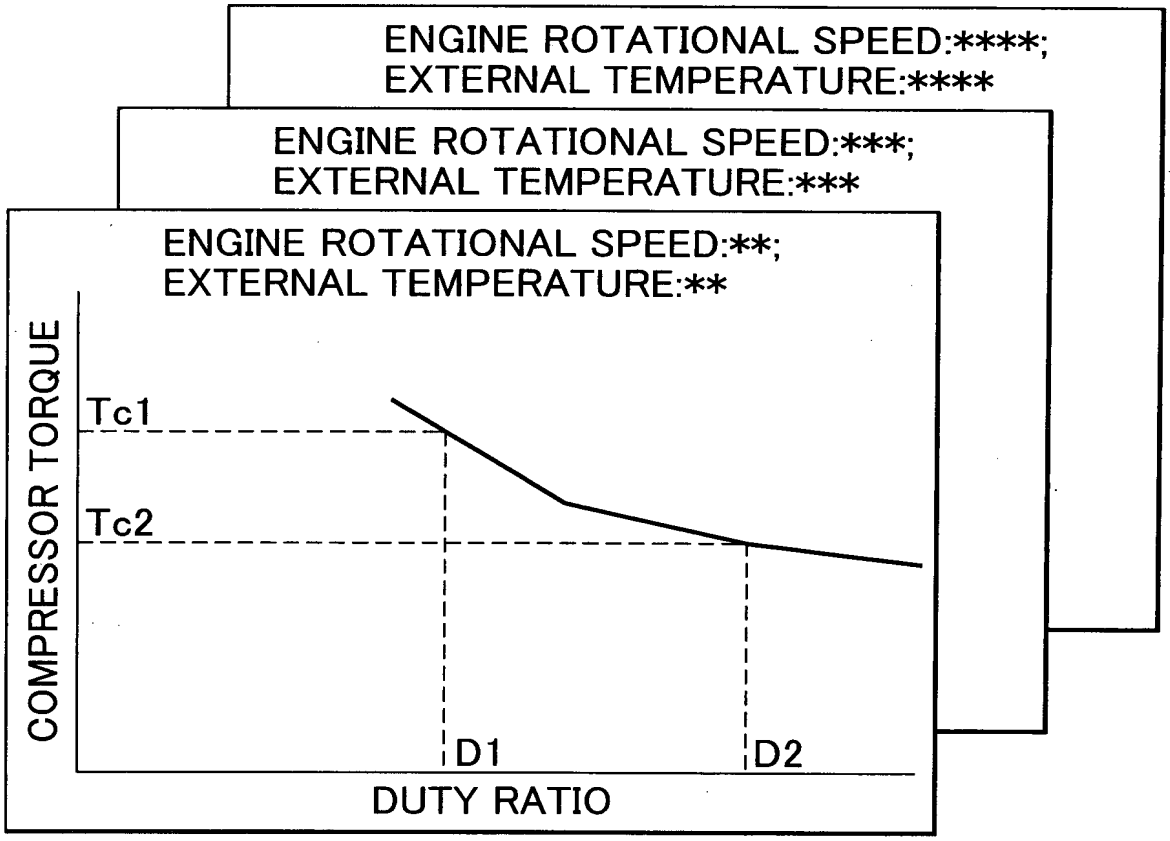
ENGINE ROTATIONAL SPEED:****;
EXTERNAL TEMPERATURE:****
ENGINE ROTATIONAL SPEED:***;
EXTERNAL TEMPERATURE:***
ENGINE ROTATIONAL SPEED:**;
EXTERNAL TEMPERATURE:**
COMPRESSOR TORQUE
Tc1
Tc2
D1
D2
DUTY RATIO

FIG.9

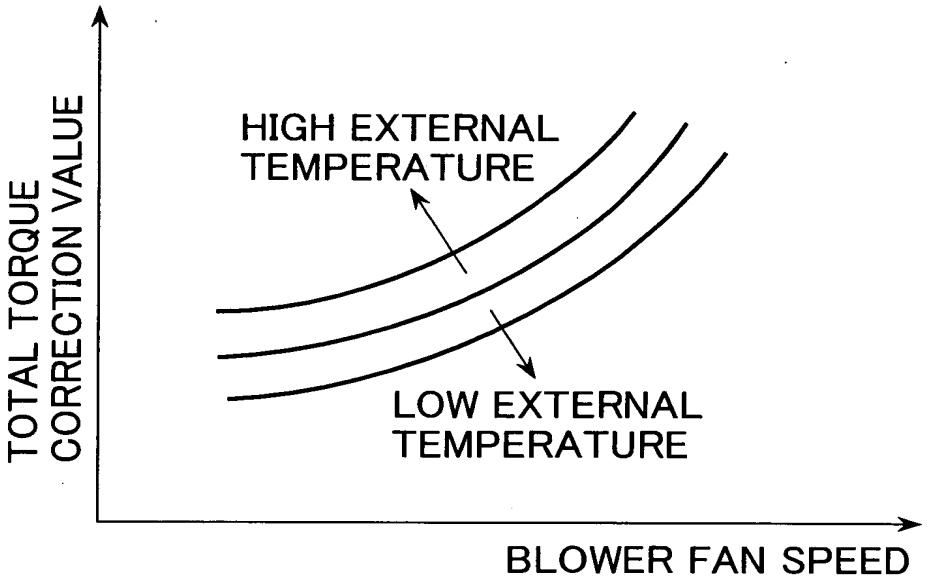
TOTAL TORQUE CORRECTION VALUE
HIGH EXTERNAL TEMPERATURE
LOW EXTERNAL TEMPERATURE
BLOWER FAN SPEED

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FIG.10

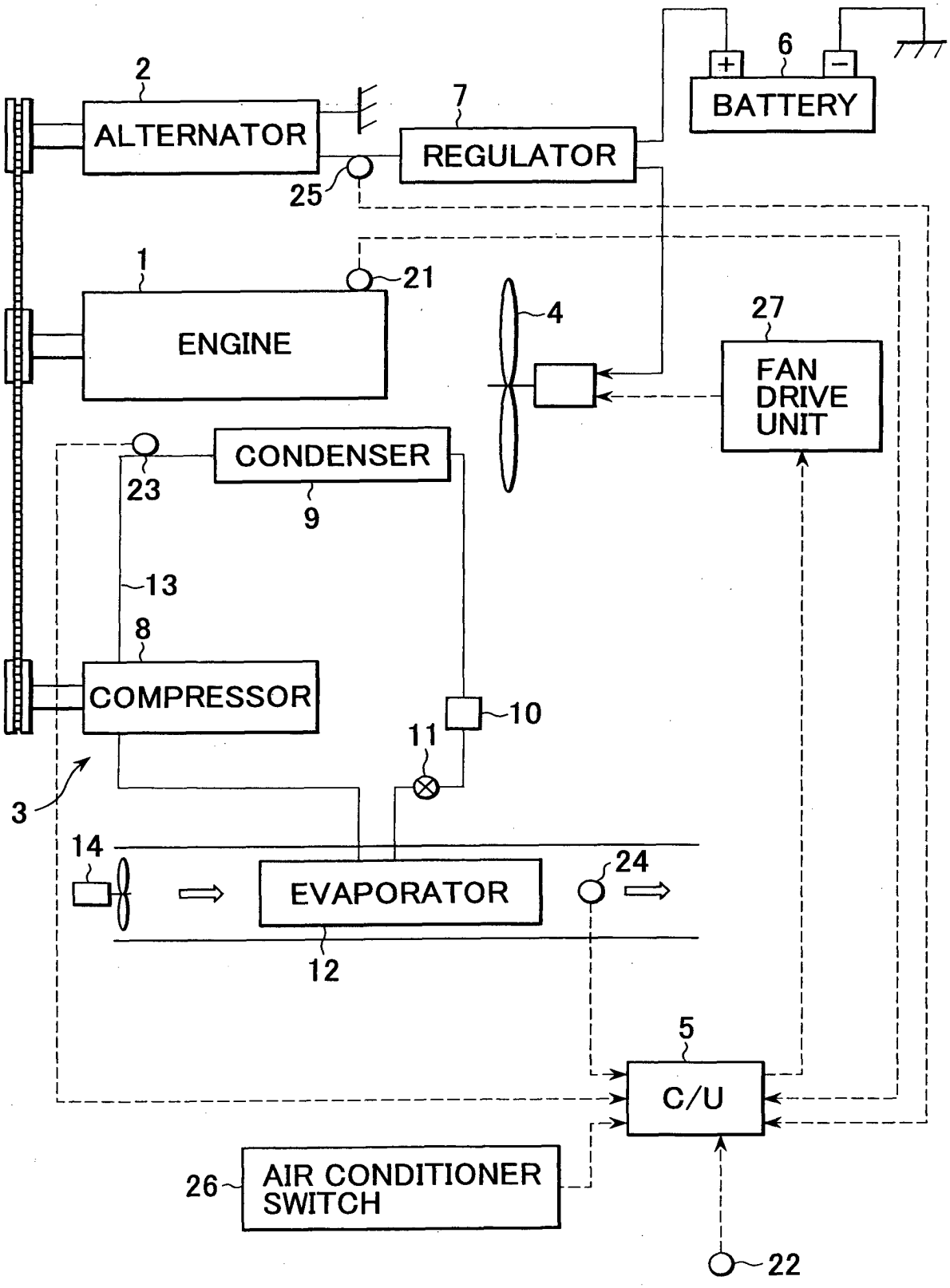

FIG.11A

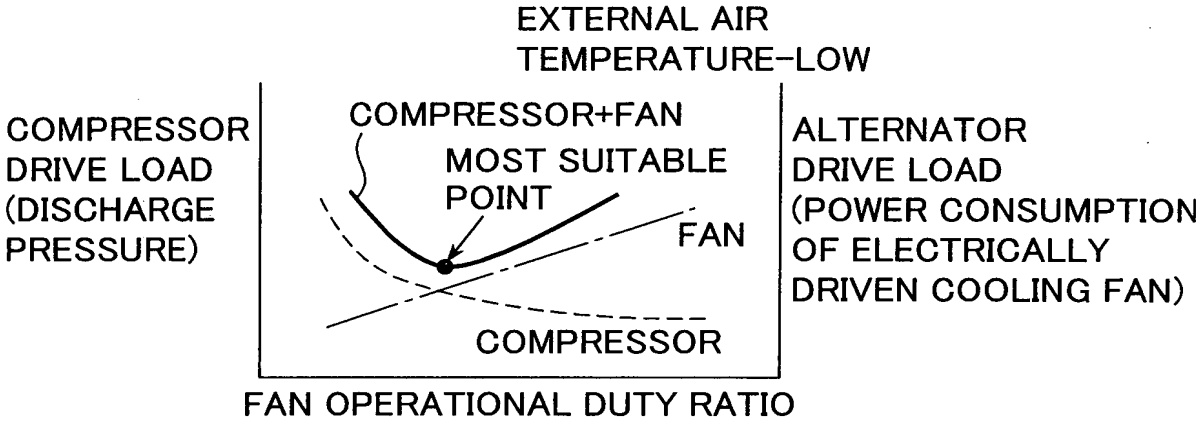

FIG.11B

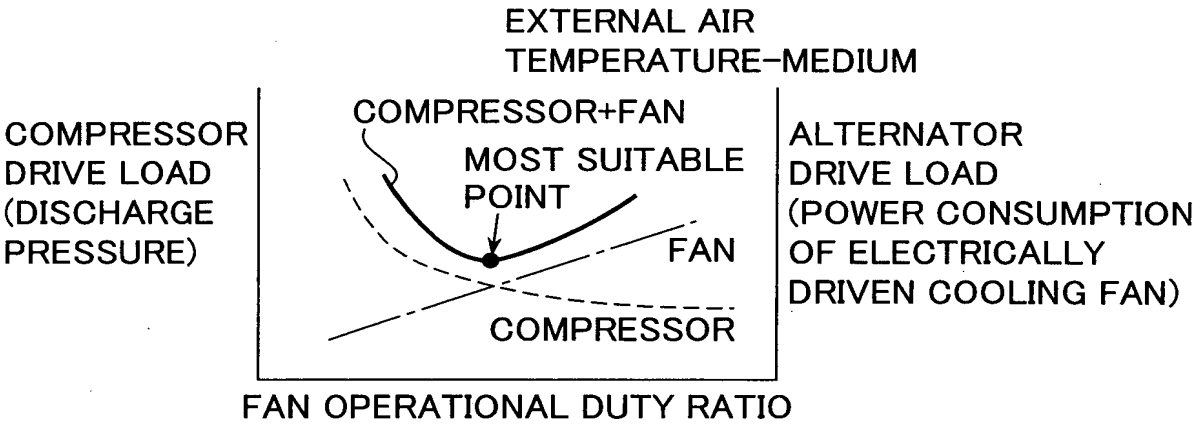

FIG.11C

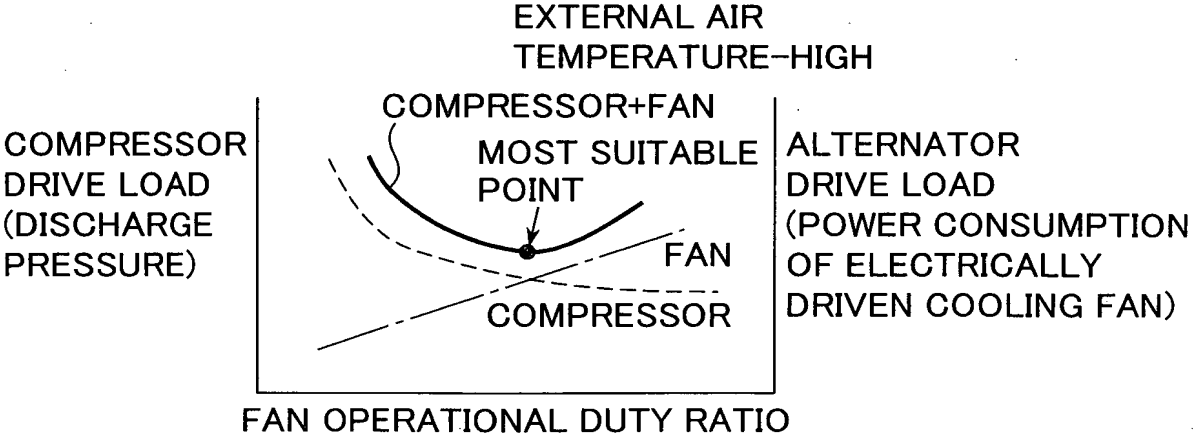

FIG.12

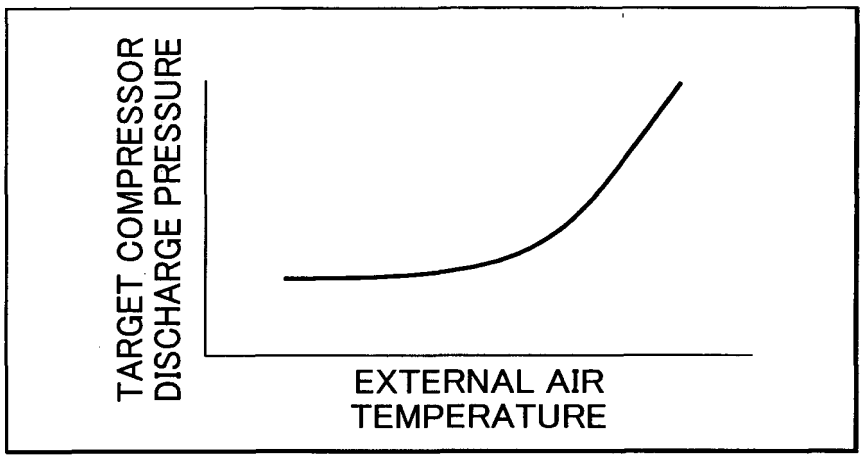

FIG.13

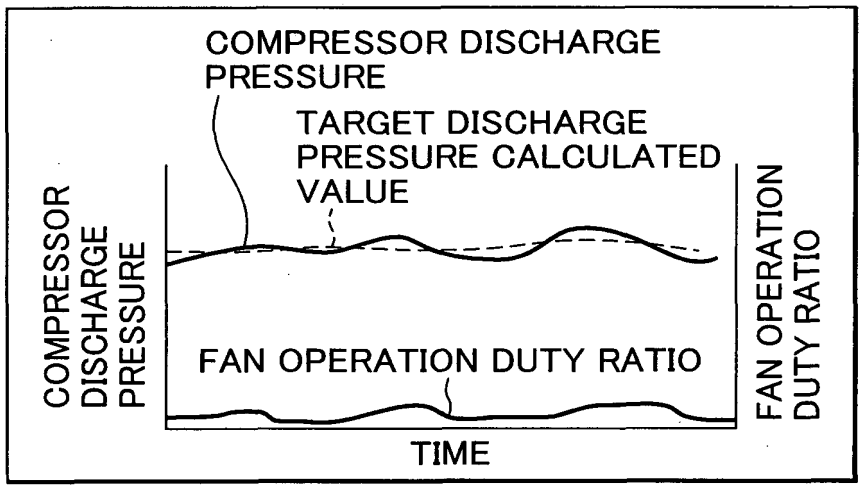

FIG.14

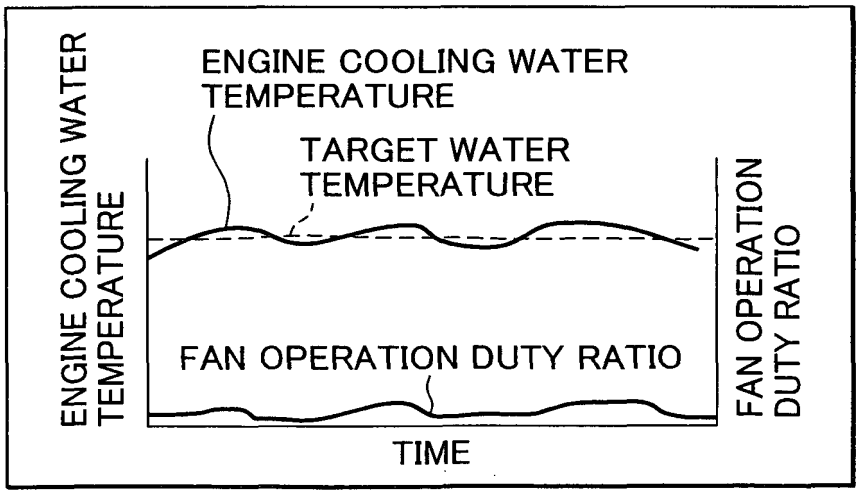

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FIG.15

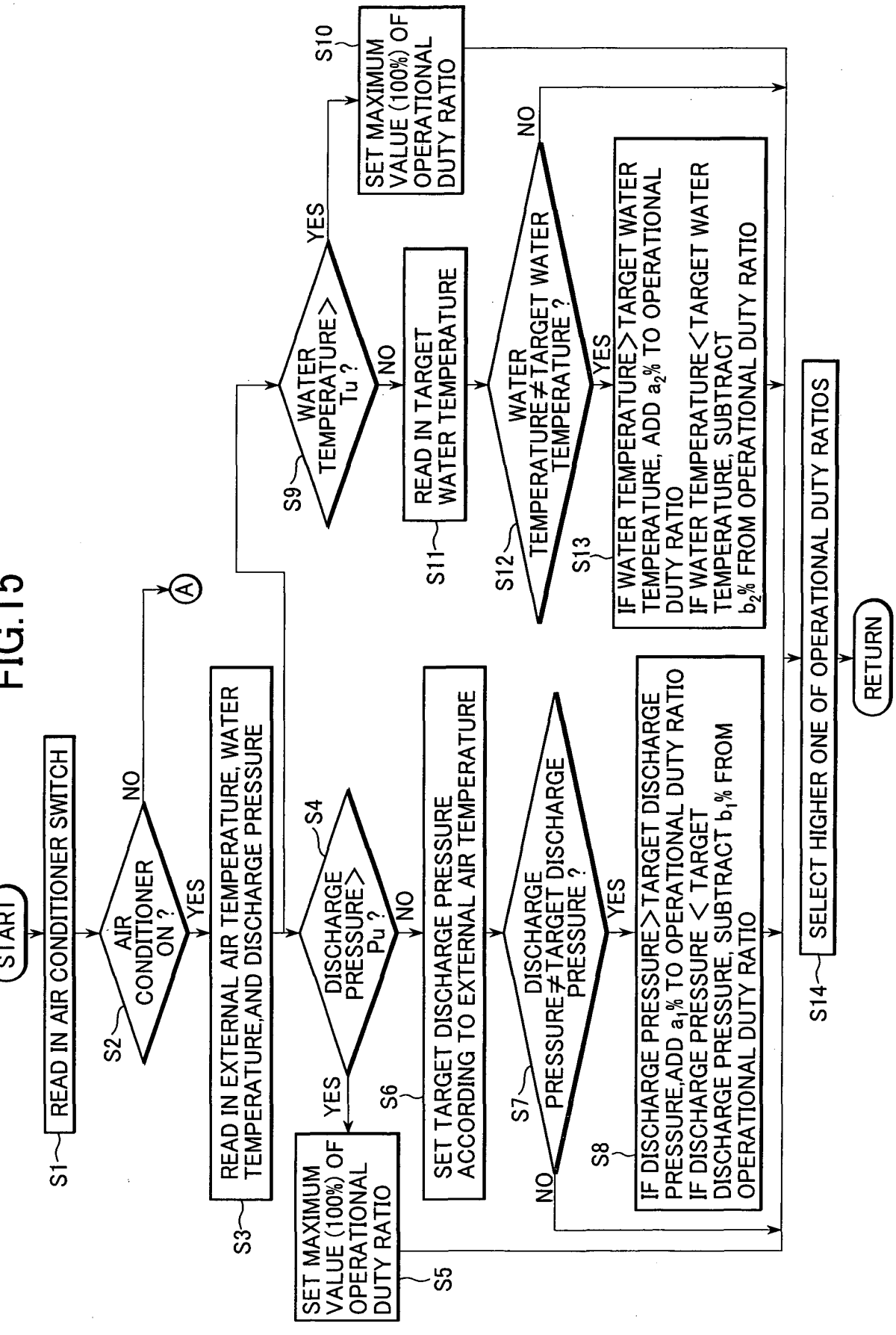

FIG.16